



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/608,229	06/30/2003	Jae-Yong Park	053785-5127	1767
9629	7590	06/02/2005	EXAMINER	
MORGAN LEWIS & BOCKIUS LLP 1111 PENNSYLVANIA AVENUE NW WASHINGTON, DC 20004			HODGES, MATTHEW P	
			ART UNIT	PAPER NUMBER
			2879	

DATE MAILED: 06/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/608,229

Applicant(s)

PARK ET AL.

Examiner

Matt P. Hodges

Art Unit

2879

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 17 March 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 12-20 is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-8 and 11 is/are rejected.
- 7) ☒ Claim(s) 4, 9 and 10 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 June 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Specification*

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3, 5-8, and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gourlay (WO 02/078101 A1).

Regarding claim 1, Gourlay discloses (See figure 2) an organic EL display device including a first substrate (15), a second substrate (7), a first electrode (8) coated on the second substrate, an Organic EL layer (10) coated on the first electrode, a second electrode (12) coated on the organic EL layer, first connection electrode (17) coated between the second electrode and the drain electrode (16), and a sealant (18). Further, Gourlay discloses the use of an active matrix pixel circuitry on the bottom substrate. Though not explicitly stated, the active matrix pixel circuitry would necessarily have a driving thin film transistor with one end connected to the drain electrode in order for the device to operate. Gourlay does not appear to specify the circuit elements for powering the first electrode and the connection of that element to the first electrode. However Gourlay does specify that all electrical connections are made between the first and

Art Unit: 2879

second substrates. Further power for the first electrode would advantageously come for a contact point outside of the display area so as not to interfere with the active elements or cause unnecessary capacitance. For these reasons it would have been obvious to one having ordinary skill in the art at the time the invention was made to use a contact pad on the first substrate that is connected with a second connection electrode structure to the first electrode in the device as disclosed by Gourlay.

Regarding claim 2, Gourlay discloses the use of polycrystalline silicon on the active layer. (Page 6 lines 10-15).

Regarding claim 3, a power line is necessarily provided to the driving thin film transistor in an active matrix OLED.

Regarding claims 5-7, Gourlay disclose the use of ITO for the first electrode or anode and Al for the second electrode or cathode. (Page 8 lines 10-15 and lines 26-33).

Regarding claim 8, the sealant material is formed throughout the cavity and as such surrounds the second connection electrode structure.

Regarding claim 11, Gourlay discloses (see figure 3) the use of several electrodes (13 and 11a) between the first or second electrode and the connection electrode.

***Allowable Subject Matter***

Claims 12-20 are allowed.

Art Unit: 2879

Claims 4, 9 and 10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

Regarding claim 4, the references of the Prior Art of record fails to teach or suggest the combination of the limitations as set forth in claim 4, and specifically comprising the limitation of an organic EL display device including a storage capacitor connected to the gate electrode.

Regarding claim 9, the references of the Prior Art of record fails to teach or suggest the combination of the limitations as set forth in claim 9, and specifically comprising the limitation of an organic EL display device including the second connection electrode structure disposed on the exterior of the sealant.

Regarding claim 10, the references of the Prior Art of record fails to teach or suggest the combination of the limitations as set forth in claim 10, and specifically comprising the limitation of an organic EL display device including a plurality of first auxiliary electrodes disposed between the pixel regions and where the first auxiliary electrodes have a lower resistance than the first electrodes.

Regarding claim 12, the references of the Prior Art of record fails to teach or suggest the combination of the limitations as set forth in claim 12, and specifically comprising the limitation of A method of fabricating an organic electroluminescent device including forming a first insulating layer on a first substrate; forming an active layer on the first insulating layer at each of the plurality of pixel regions, the active layer including polycrystalline silicon and having source and drain regions; forming a second insulating layer on the active layer; forming a gate electrode

Art Unit: 2879

on the second insulating layer over the active layer; forming a third insulating layer on the gate electrode, the third insulating layer having a first contact hole exposing the source region and a second contact hole exposing the drain region; forming source and drain electrodes and a first pad on the third insulating layer, the source electrode being connected to the source region through the first contact hole, the drain electrode being connected to the drain region through the second electrode, and the first pad being disposed at the peripheral region; forming a fourth insulating layer on the source and drain electrodes and the first pad, the fourth insulating layer having a third contact hole exposing the drain electrode, and fourth and fifth contact holes exposing the first pad; forming first and second connection electrodes on the fourth insulating layer, the first connection pattern being connected to the drain electrode through third contact hole, the second connection electrode being connected to the first pad through the fourth contact hole; and attaching the first and second substrates together with a sealant material,

Regarding claims 13-20, claims 13-20 are allowable for the reasons given in claim 12 because of their dependency status from claim 12.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period

Art Unit: 2879

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

### *Response to Arguments*

Applicant's arguments see request for reconsideration, filed 3/17/2005, with respect to provisional double patenting rejection have been fully considered and are persuasive. The provisional double patenting rejections has been withdrawn.

Applicant's arguments filed 3/17/2005 with regards to standing rejection under Groulay have been fully considered but they are not persuasive.

Regarding applicant's assertion that the rejection specifies that the first connection electrode and second connection electrode are identified with elements 8 and 12 respectively, the examiner respectfully disagrees. Elements 8 and 12 are identified as the first electrode and second electrode. The first connection electrode is identified by element 17, while the second connection electrode is not specified in the drawing, but can be seen at the periphery of the substrate connecting the first electrode and the base substrate.

Regarding applicant's assertion that the Groulay reference fails to suggest the use of power connectors outside of the display area, the examiner respectfully disagrees. With regards to connection elements 17, the applicant does include connection electrodes inside the display area, as required by the operation of the active matrix device. However with regards to the powering of the first electrode, the figure shows connection elements outside of the display area

Art Unit: 2879

connecting to the exposed first electrode. Further the first electrode is covered at all points inside the display area, thus requiring a connection outside of the display area. Finally, as pointed out in the rejection, Groulay does disclose the powering second substrate by elements on the first substrate.

***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matt P Hodges whose telephone number is (571) 272-2454. The examiner can normally be reached on 7:30 AM to 4:00 PM M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel can be reached on (571) 272-2457. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

mph



**NIMESHKUMAR D. PATEL  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800**